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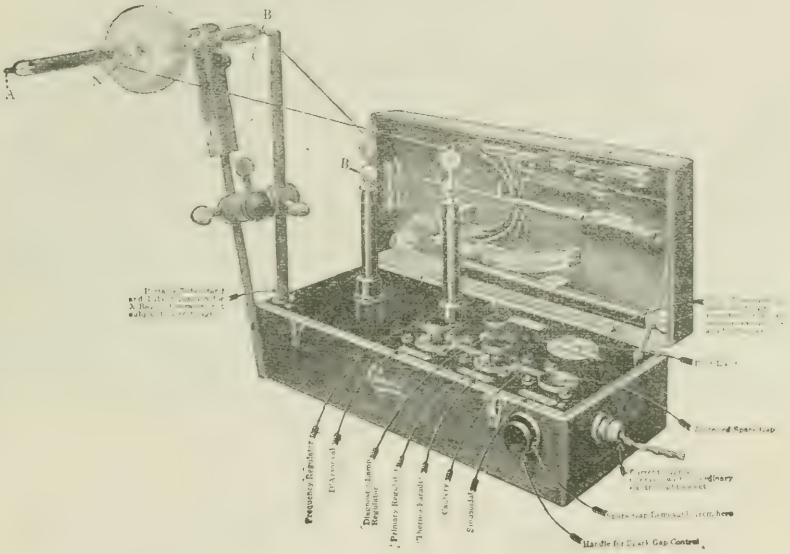

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—OF—
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Original Communications

HERNIAS OF THE UTERINE ADNEXÆ.

BY AIME PAUL HEINECK, M.D.,
Surgeon to the Cook County Hospital, Chicago.

(Concluded from last month.)

GLUTEAL, SCIATIC OR ISCHIADIC HERNIAS.

This is a very uncommon condition. In the medical literature of the last one hundred and fifty years, only twenty-three cases are recorded (E. Koeppl). This class of hernias escape from the abdominal cavity by way of either the greater or the lesser sacro-sciatic foramen. There are three varieties: The supra-pyriformis, the infra-pyriformis and the spino-tuberosa. These hernias may be congenital or acquired, may occur on either side of the body and are subject to all the complications of hernia in general. Thirteen of the cases on record were observed in women. Schilbach's case is the only one on record making its exit through the lesser sacro-sciatic foramen. The diagnosis was first made at the autopsy table. During life, there had been genital hemorrhage and symptoms of ileus. At the post-mortem examination the ovary was found in the hernial sac, the tube and the broad ligament being caught in the hernial ring.

We found only two cases of ischiadic hernia of the uterine appendages. Both were acquired hernias of the right tube and

ovary, occurring in multiparous patients. Both were subjected to operation and recovered.

Woefler's case is interesting in that it was successfully subjected to an operation for radical cure. The hernia, an infra-pyriformis one, emerged like all others of its type along the lower border of the pyriformis muscle in close relation to the internal pudic, inferior gluteal and sciatic nerves and vessels. For the previous two years, the patient had had attacks of pain radiating along the course of the sciatic nerve, and abdominal suffering associated with nausea and, at times, vomiting. In the right gluteal region, there could be palpated below the muscles, a globular fluctuating, fist-sized, non-reducible swelling from which, at one time, there was removed by aspiration fifty cubic centimeters, and, at another time, five hundred cubic centimeters of dark reddish fluid containing much albumin, red blood corpuscles and leucin-tyrosin crystals.

The following operation was performed: An eight centimeter long incision, parallel to the course of the fibres of the gluteus maximus, was made over the summit of the hernial swelling. The muscle fibres were separated; the hernial sac exposed, isolated and opened. It contained the ovary and the end of the tube. The sac contents were ablated; the resulting stump reduced in the abdominal cavity. The sac was then ligated and cut off; after which, the operator closed the hernial orifice by approximating the pyriformis muscle to the lesser sacro-sciatic ligament.

OBTURATOR HERNIAS.

In obturator hernias, the herniated viscus or viscera, always escape from the abdominal cavity by way of the obturator or sub-pubic canal. These hernias, though less infrequent than sciatic hernias, are nevertheless uncommon; not more than two hundred cases are recorded in the medical literature.

They are usually small; may be unilateral or bilateral (are more frequent on the right side); may co-exist with hernias of a different type. They may be reducible, irreducible or strangulated.

Picque and Poirier recognize three main anatomical varieties

of obturator hernia. In the first variety, the most common, the hernia follows the entire course of the obturator, appearing as a swelling in front of the external orifice of this canal. In the second variety the hernia escapes from the abdominal cavity through the pelvic orifice of the sub-pubic canal, but following the course of the inferior division of the obturator nerve; does not traverse the canal's entire length, and makes its exit by passing between the superior and middle bundles of the obturator externus muscle. In the third variety, the hernial protrusion also enters the pelvic orifice of the obturator canal, but becomes lodged between the obturator membrane and the obturator externus muscle.

Objective symptoms are frequently absent. When a swelling is visible and palpable, it is usually of small volume, and is located in the most internal portion of Scarpa's triangle, somewhat resembling a femoral protrusion. It is, however, non-pediculated and does not extend in the direction of the crural canal. In suspected cases, one should always determine whether there is increased pain when the obturator externus is put under tension abduction and rotation inward of the thigh.

Vaginal examination is important. The internal orifice of the sub-pubic canal is accessible to the vaginal hand.

Two routes are advised for the treatment of obturator hernias: The abdominal route and the obturator route. In the obturator route, the following steps are employed:

1. An incision eight centimeters long is made about three and a half centimeters internal and parallel to the femoral artery.
2. Separate with a grooved sound the internal border of the pectineus muscle from the outer border of the adductor brevis and adductor longus muscles.
3. If necessary, divide a few of the fibres of the pectineus muscle close to their insertion on the pubic bone, so as to facilitate digital exploration of the obturator region.
4. Expose, isolate and open sac; determine its relation to the obturator nerve and vessels, after which nick constricting point if hernia be strangulated and reduce or ablate hernial contents.
5. Closure of wound.

FEMORAL HERNIAS.

Hernias, which in their escape from the abdominal cavity pass between Poupart's ligament and the horizontal ramus of the pubis and sooner or later protrude in Scarpa's triangle, are called femoral hernias. Common femoral hernias escape from the abdomen through an orifice bounded anteriorly by the most internal portion of Poupart's ligament; posteriorly, by the horizontal ramus of the pubis; externally, by the femoral vein and the sheath of the femoral vessels; internally, by Gimbernat's ligament. They descend along the most internal compartment of the femoral sheath and ultimately emerge through the saphenous opening. These hernias are contiguous to the femoral vein which always lies external, and they carry along in their progress through the crural canal a mass of condensed areolar tissue, known as the septum crurale. They show a greater tendency to expand upward than downward, because the cribriform fascia is less adherent to the upper margin of the saphenous opening.

The small number (sixten cases) of femoral hernias which we were able to collect, as compared to inguinal hernias, confirms the now accepted but previously disputed fact that, in the female, inguinal hernias are of more frequent occurrence than femoral hernias. All these femoral hernias were of the acquired type; it is known that congenital femoral hernias are pathological rarities. A femoral hernia is essentially a hernia of adult life. Either side of the body may be involved. The tendency to double femoral hernia is less than that to double inguinal hernia. All femoral hernias, irrespective of contents or of sex of bearer, are of more frequent occurrence on the right side (Wernher, Macready, Berger).

The tubal hernias contained the oviduct either in part or in its entirety, alone or associated with intestine, omentum or both. The presence of the appendix vermiformis in a femoral hernial sac is rare. Coley states that in 2,200 cases of hernia operated upon from 1890 to March 1908 in the Hospital for Ruptured and Crippled, the appendix vermiformis alone was found in ten, the cecum and appendix together in seven. In not a single one of

Coley's cases was the appendix found in a femoral hernial sac. (W. B. Coley, Keen's Surgery, 1908, vol. I, p. 78.)

These hernias may be reducible, irreducible or strangulated. Strangulation can occur at any one of the following sites:

(a) Internal femoral ring.
(b) Margin of Gimbernat's ligament.
(c) Margin of the saphenous opening.
(d) Meshes of the cribriform fascia.
(e) Irregularities in the hernial sac.

The following operations were performed:

(a) Amputation of fimbriated end of tube.
(b) Incision of hernial swelling and creation of an artificial anus.
(c) Ablation of tube.
(d) Ablation of ovary.
(e) Ablation of tube and ovary.
(f) Excision of hernial sac and return of tube to abdominal cavity.
(g) Removed tube and ovary and resected gangrenous intestine.

Truss treatment of femoral hernia is notoriously unsatisfactory and is considered as being only palliative and not at all curative. In femoral hernias, on account of motions of thigh, it is difficult to apply, and especially to maintain pad-pressure in a position conducive to closure of the hernial openings.

Coley whose clinical experience with the treatment and cure of hernia is greater than that of any living American surgeon, supplements to high ligation and ablation of the hernial sac with the thorough removal of all extra-peritoneal fat the following step: He introduced a purse-string suture of kangaroo tendon in such a way as to bring the floor of the femoral canal in contact with the roof.

INGUINAL HERNIAS.

Hernias which escape from the abdominal cavity, either through the internal or external inguinal fossae, and which emerge upon the surface when complete by way of the external

abdominal ring, are known as inguinal hernias. Of all hernias, they are the ones most frequently noted in the female.

Inguinal hernias of the uterine adnexæ may be complete or incomplete. In the incomplete form, the hernia has not escaped beyond the external abdominal ring. Inguinal hernias may be right-sided or left-sided. They may be unilateral or bilateral. As previously stated, all the bilateral hernias of the uterine adnexæ, tubal, ovarian or tubo-ovarian, recorded in the medical literature of the last twenty years, were of the inguinal variety. They may be reducible or irreducible. They may be strangulated or the seat of torsion. This last accident has only been observed in congenital inguinal hernias, the contents of which were irreducible.

Of the uncommon types of inguinal hernias only several could be found. There was one direct hernia. This, especially in the female, is an uncommon form. The main characteristics of direct hernias are that the protrusion takes place by way of the internal inguinal fossa, that the neck of the sac is always to the inner side of the deep epigastric vessels and, in the female, that the round ligament is distinct from and to the outer side of the sac. We found three interstitial or intra-parietal hernias. All the other inguinal hernias were of the ordinary type, that is, external or indirect or oblique. An ordinary or oblique inguinal hernia in its course through the inguinal canal (narrower in the female than in the male) is accompanied by the round ligament; as it escapes from the external abdominal ring, it appears in the upper portion of the labium majus, in which it descends to a greater or less extent.

Inguinal hernias vary in size and in form. They may be almond-shaped, ovoid, sausage-shaped, pear-shaped, pyriform, globular or other form too numerous to mention.

SYMPTOMS AND DIAGNOSIS.

Hernias of the uterine appendages present all the symptoms common to hernias in general. In some hernias of slow and gradual development, owing to the absence of symptoms, not uncommonly the patient ignores that he has a rupture. Some cases

do not give rise to any symptoms; some give rise to very slight disturbances; many remain painless until the appearance of the menses and thus are first recognized at about the age of puberty. Pain may be absent during the entire course of a slowly developing hernia. In other cases, the hernial swelling may be so small as to be completely overlooked by a careless observer. Inspection, palpation and percussion of the hernial regions are routine steps in the examination. After having demonstrated the presence of a hernia, the operator has to determine the type of hernia present and the nature of its contents. The existence of other malformations is to be ascertained as they may be of such a nature as to partially justify the sacrifice of healthy herniated organs.

Clinicians usually do not experience any difficulty in diagnosing a hernia; at times, they are in doubt as to the type of the hernia present in the case at hand. In fatty individuals, the exact position of the hernial nick is difficult to determine. Obturator hernias are rare, and are found internal to the femoral opening; in femoral hernias, the swelling is found to be almost if not entirely below a line extending from the anterior superior iliac to the pubic spine.

In the female, the tumor-mass caused by a complete oblique inguinal hernia, even of a moderate size, will cause a swelling extending into the labium majus.

In some hernias of the uterine appendages, the patients complain of a feeling of weight and discomfort. The symptom, "tenderness on pressure", we find frequently reported. Some of these hernias are painless, some are so painful as to interfere very much with the patients' well-being. Impulse on coughing is not infrequently noted. It is not, however, a constant symptom present; it may be absent. Menstrual disturbances are recorded.

If an oblique inguinal hernia be incomplete, that is, if it does not extend beyond the inguinal canal, it may be mistakenly diagnosed tumor of the round ligament, bubo, epiplocele or encysted hydrocele of the canal of Nuck. In tumors of the round ligament, epiploceles, encysted hydroceles of the canal of Nuck, a mistake in diagnosis is not very significant, as in all these condi-

tions one must, to obtain cure, resort to operative treatment and to exposure of the inguinal canal.

TREATMENT.

Six of the reported cases were either autopsy-table or dissecting room discoveries. In some cases, the nature of the operative intervention is not stated. In the other cases, the operators, after performing either a laparotomy or a herniotomy, disposed of the herniated organs either by reducing or removing them entirely or by removing a part and reducing the remainder. In some cases, the reduction of the hernial contents necessitated a preliminary division or a dilatation of the hernial rings, internal or external.

In two hundred and thirteen operated cases the results are stated: 11 deaths; 202 recoveries.

We advise that all hernias of the uterine appendages, irrespective of anatomical site or of size or of age of bearer, be subjected to an operation for radical cure:

(a) If the hernia be irreducible.

(b) If the hernia be strangulated.

(c) If the pedicle of the herniated organ or organs be the seat of torsion.

After the age of two years —

(a) If the hernia be bilateral.

(b) If other hernias be co-existent.

(c) When hernia can not be painlessly, completely and permanently kept reduced.

(d) If organs other than the uterine appendages be also present in the same hernial sac.

(e) If the wearing of a hernial truss causes pain or aggravates the symptoms.

(f) If the patient has to be subjected to ether or chloroform anæsthesia for the performance of an operation of election, double advantage can be taken of this anæsthesia, and an operation for the radical cure of the hernia performed.

(g) If the patient is exposed to pregnancy.

Operation in uncomplicated hernias of the uterine adnexæ is no

more dangerous than the operation for the radical cure of other hernias. It has practically no mortality. Infants bear hernia operations remarkably well. Broca performed four hundred and fifty operations in children under fifteen years of age with but one death.

The operation which has given the most universal satisfaction in the treatment of inguinal hernias is that devised by Bassini. It has the advantages of safety, simplicity and efficacy.

We advise operators to observe in their operations for inguinal hernia the following suggestions:

1. Always wear, and have the assistants wear, rubber gloves.

2. All ligatures and irremovable buried sutures should be of absorbable material. The purpose of sutures is to keep divided tissues in apposition until organic union has been effected. After this has been accomplished, sutures if not absorbed or not removed may originate irritation, may act as predisposants to inflammation, to sinus formation. We strongly condemn the use of silk for vessel ligation or for buried sutures.

3. Always divide the aponeurosis of the external oblique muscle to an extent sufficient to give a good exposure of the inguinal canal, and of its contents. In the female, the inguinal canal in its normal state and after a hernia operation, in its restored state, should, outside of a few arterioles and nerve filaments, contain nothing but the round ligament, a structure much smaller than the spermatic cord, and if the latter is not the seat of disease should never be sacrificed.

4. Always make a high and careful dissection of the hernial sac from the surrounding tissues, and especially from the round ligament to which it is often quite intimately adherent.

5. Always open the sac and determine by direct inspection and palpation the nature and state of the hernial contents.

6. After reduction or ablation of the hernial contents the sac is to be transfixed and ligated as high as possible. Sac is then removed flush with the peritoneal cavity. So as to prevent the occurrence of peritoneal bulging at the internal ring, we are in the habit of anchoring or fixing the stump of the sac about two centimeters above this point.

7. Never sacrifice the round ligament; it is harmful to the statics of the uterus. Never transplant the round ligament; it is unnecessary. The round ligament is left undisturbed at the bottom of the wound, emerging at the lower angle of the latter; the internal oblique muscle is sutured to the shelving portion of Poupart's ligament; the divided margins of the external oblique aponeurosis are sutured and the skin incision closed. No drainage. After operation, no truss should be worn; a truss does not support the scar, it weakens it.

8. In the female, the internal and external abdominal rings can be closed without detriment to the patient. In direct inguinal hernias, ligation of the deep epigastric artery is at times unavoidable.

In hernias of the uterine appendages, the operator must decide as to whether the hernial contents are to be returned to the abdominal cavity or whether they are to be removed.

As to the herniated tube, ovary or tube and ovary, when normal, it goes without saying that they should be returned, irrespective of patient's age; if adherent to sac-wall or to some hernial content the adhesions are to be loosened or divided, and if the organ or organs do not show marked structural impairment, they are to be reduced. These organs, when herniated, should be removed, if they be the seat of:

(a) Unavoidable or actual gangrene.

(b) Benign neoplastic disease.

(c) Malignant neoplastic disease.

(d) Voluminous cyst formation.

(e) Malformation or incomplete development.

(f) Suppurative inflammation.

(g) Hematoma or intestinal ovarian hemorrhage.

(h) Seat of tubal gestation previous or subsequent to rupture of fetal sac.

(i) Tuberculosis limited to or extending beyond the herniated organs.

(j) Distortion beyond recognition.

(k) Such pathoiogical changes as prevent function.

SUMMARY.

1. The fallopian tube, the ovary or the tube and ovary, in part or in their entirety, may be herniated.

2. The herniated tube, ovary or tube and ovary may be the sole content of the hernial sac or there may be present as associated hernial contents one or two or more of the following structures or organs: Meckel's diverticulum, appendix vermiformis, omentum, urinary bladder, intestine (small or large), uterus.

3. Tubal, ovarian and tube-ovarian hernias are congenital or acquired, unilateral or bilateral; exist alone or in association with one or more other hernias of the same or of dissimilar anatomical types, of the same or of dissimilar clinical characteristics.

4. These hernias, in a small proportion of cases, coexist with malformations, underdevelopment or absence of other internal genitalia or of some externai genitalia. Imperforate vagina, absence of vagina, atresia of tube, unilateral absence of tube, of ovary or of tube and ovary, absence of cervix uteri, rudimentary uterus, absence of uterus, etc.

5. In individuals having a hernia of a tube, an ovary or of a tube and ovary, pathological states of other internal genitalia or of some external genitalia may be present. Vaginitis, ovarian cystoma, uterine fibroid, uterine prolapse and other uterine displacements, etc.

6. These hernias may coexist with pathological states of organs other than the internal or external genitals; chronic hydrocephalus, multiple stenosis of intestines, hydronephrosis, etc. These coexisting pathological states having no relation of cause or effect to the hernial infirmity.

7. Congenital or acquired hernias of the tube, ovary or tube and ovary, may develop at any period of life. These hernias have been observed in nulliparæ, in primiparae and in multiparæ. No age is exempt. No race is immune.

8. According to their anatomical site, hernias of the uterine appendages are designated as post-operative or ventral, gluteal, sciatic or ischiadic, obturator, femoral and inguinal.

9. The tube, the ovary or the tube and ovary may be present

alone or in association with other organs in the sac of any variety of gluteal, obturator, femoral or inguinal hernias.

10. Clinically, these hernias are reducible, irreducible, non-inflamed, inflamed, strangulated or their pedicle may be the seat of torsion.

11. Torsion of the pedicle of a herniated ovary or of a tube and ovary, an accident peculiar to, and not infrequent in, hernias of the uterine appendages, gives the same clinical symptoms and determines the same anatomical changes in the herniated organs as are observed in the strangulation of hernial contents at one or another or more points.

12. We were able to collect eight times as many hernias of the inguinal type as of all the other hernial types put together.

13. Tubal, ovarian and tubo-ovarian inguinal are recent, old or recurrent; are direct, interstitial or intra-parietal, indirect or oblique. If indirect or oblique, they are either complete or incomplete. A few sliding hernias are on record.

14. All the bilateral, tubal, ovarian or tubo-ovarian hernias recorded in the medical literature of the last twenty years were of the inguinal variety. In bilateral hernias, both hernias may or may not show the same degree of development; they may have appeared simultaneously or one may have appeared a shorter or longer time before the other. They may show similar or dissimilar clinical characteristics. When bilateral, one hernia may be irreducible and the other reducible.

15. All the hernias in which the complication "torsion of the pedicle" occurred were irreducible congenital inguinal hernias.

16. All the femoral tubal, ovarian or tubo-ovarian hernias recorded in the medical literature of the last twenty years were of the acquired type and appeared in advanced adult life. "Femoral hernia is essentially a hernia of adult life."

17. Hernias of the uterine appendages, in the absence of anomalies of the other internal genitalia or of the external genitalia, do not prevent conception, do not interfere with gestation, nor unfavorably influence parturition. Pregnancy can occur previous to, during and subsequent to the existence of hernias of this nature.

18. The etiology of hernias of the uterine appendages is that of hernia in general. As main factors should be cited: All conditions that weaken the abdominal wall, all conditions that increase the intra-abdominal pressure and all conditions that increase the mobility of the uterine adnexæ. Heredity, pregnancy and the partial or complete persistence of the canal of Nuck are the most important causes.

19. The herniated organ or organs may be free from all degenerative changes.

20. The herniated organ or organs may be bound to the sac-wall or to each other; may be the seat of congestion, gangrene, hemorrhage, inflammation, suppuration, tuberculosis (primary or secondary, cystic and neoplastic disease (benign or malignant).

21. The herniated organ may be the seat of gestation.

22. The hernial sac and the herniated adnexa or adnexæ may be the seat of an inflammation, suppuration or other in character, which in progressing by continuity of surface has extended upward from the vagina, giving us the following anatomical picture: Vaginitis, endocervicitis, endometritis, salpingitis or pyosalpinx, ovaritis and saccular peritonitis.

23. The hernial sac and the herniated contents may be the seat of an inflammation, suppurative or other in character, which has reached the tube and ovary by way of the parametrial and parasalpingeal connective tissue.

24. Pathological processes originating in the hernial contents may, by extension, by contiguity of tissue, involve the sac and its overlying tissues.

25. The hernial sac and the herniated tube, ovary or tube and ovary,can become the seat of pathological processes secondary to disease of the associated hernial contents. Epiploitis, appendicitis, gangrenous gut, etc. Infection spreading by contiguity of surfaces.

26. The herniated tube, ovary or tube and ovary and the associated hernial contents may be free of disease, or the uterine adnexæ may be normal and pathological changes be present in the associated hernial contents: Appendicitis, gangrenous gut,

epiploitis, etc. The associated hernial contents may be normal and the herniated uterine adnexæ be the seat of morbid changes.

27. It is at times difficult, at times impossible, to state with absolute precision whether the anatomical changes present in the herniated organ or organs developed previous to or subsequent to the displacement of the tube, ovary or tube and ovary into the hernial sac.

28. Truss treatment for hernias of the uterine appendages is curative, is often productive of discomfort and interferes with the nutrition and development of the herniated tube or ovary.

29. Women who suffer from any form of hernia should be carefully watched before, during and after their confinement so as to prevent or rather minimize any undue strain upon weak regions of the abdominal wall. These women, at the close of lactation or towards the end of the first year following their confinement, should in the absence of contraindications be subjected to an operation for radical cure of the hernia.

30. In the female, all hernias, irrespective of anatomical site, of clinical condition or of nature of contents, should, in the absence of a constitutional state contraindicating operations of election, be subjected to an operation for radical cure.

31. Clinical conditions so closely simulating hernias of the uterine appendages that a positive diagnosis without operation appears impossible, should be subjected to operative treatment. Only benefit can be derived from adherence to this rule. A diagnosis is established and a cure is effected.

32. In these hernias as in all other hernias, the ideal time for operation is previous to the development of degenerative or other pathological conditions in the herniated organ or organs and previous to the occurrence of any of the various complications incident to hernias.

33. The mortality of operations for the radical cure of hernias, if performed at an opportune time and by a rapid operator competently assisted, is nil.

34. To be effective, operations for radical cure of hernias must well fulfill two essentials: The suppression of the sac and the strengthening of the area through which the hernia has escaped.

35. In all herniotomies, the sac should be incised and the hernial contents examined.

36. In the female, the inguinal rings are comparatively small. They can, without inconvenience to the patient, be closed.

37. The herniated normal tube or ovary should never be sacrificed. These organs have an important role, and in the absence of marked structural impairment should be returned to the abdominal cavity.

38. The herniated abnormal tube, abnormal ovary or abnormal tube and ovary should be removed if their return to the abdominal cavity is associated with peril, immediate or remote, to the patient, or if these organs are so altered anatomically as to be functionally worthless. In sacrificing tissues or organs, the surgeon must be economical.

39. Until we are better informed as to the frequency and nature of true and false hermaphroditism, removed herniated uterine adnexæ not having a distinctive structure, should be subjected to a microscopical examination. This will avoid mistaking testicular for ovarian tissue and vice versa.

40. In the treatment of strangulated sciatic or gluteal, obturator and femoral hernias of the uterine appendages in which the hernial sac also contains gangrenous gut, a double operation is almost always indicated: A laparotomy for the repair of the intestinal lesions and a herniotomy for the radical cure of the hernia.

Selected Articles

A CLINICAL TALK ON ECTOPIC GESTATION.*

By H. S. Lott, M.D., Winston, N.C.

The *first* thing for us to remember about ectopic gestation is, that it is a *reality* and not a *myth*, and that its victims are dying about us every day from *rupture* and *hemorrhage—unrecognized*.

The symptoms of rupture are those of sudden loss of blood from any cause. They comprise chiefly sudden, violent, and "sickening pain," with a quickened pulse, pallor, and collapse, if the hemorrhage is great and invades vital parts.

Parry, of Philadelphia, whose classic portrayal of extra-uterine pregnancy excels all others in point of clearness, of clinical detail, and also as to the pathology concerned, says that rupture may occur as early as the third week, and in his tabulated cases took place most often in the eighth week and as late as the twentieth and even the twenty-eighth.

Among the causes of this accident, Parry lays especial stress upon the "emotions." He cites a number of cases in which fear, anger, and sudden shock were so closely related that they must have had a causative influence. He says, "At first no importance was attached to the matter, but closer study led to the conclusion that we can not deny the influence of strong emotions, occurring during or shortly after intercourse, as a cause of extra-uterine pregnancy." This fact is further borne out in the statistical evidence that more ectopic gestations occur in women who are guilty of illicit intercourse than in those in the marital relation. No doubt physical distortions and functional derangements play their part, and an important one; but the bulk of evidence is in favor of the emotional factors being paramount.

Ectopic gestation is the more comprehensive term, embracing, as it does, all varieties of erratic conception; whereas extra-

*Presented by request to Forsyth Co. Medical Society, May 14, 1912.

uterine pregnancy only applies to those cases in which the implantation is beyond the limits of the uterine wall. Various good classifications have been made, but that of Parry seems to me the most simple and practical one.

Parry's classification embraces the following classes: 1. Tubal pregnancy. 2. Ovarian pregnancy. 3. Ventral or abdominal pregnancy.

1. Tubal pregnancy has the following varieties:

(a) Tubo-ovarian, the ovum being arrested in the pavilion, which contracts adhesions with the ovary.

(b) Tubo-abdominal, the ovum being arrested in the same locality. The tube may contract adhesions with neighboring organs. If it does not, the chorion may project into the abdominal cavity, with a part of its surface bare.

(c) Tubal proper, the ovum being arrested between the pavilion and that portion of the oviduct which traverses the uterine wall.

(d) Tubo-uterine, the ovum being arrested in that portion of the tube which passes through the uterus.

2. Ovarian pregnancy presents the following varieties:

(a) Ovarian proper. The ovum is contained in the ovary, that organ remaining free from adhesions.

(b) Ovario-tubal. The ovum is contained in the ovary, which contracts adhesions with the pavilion of the tube.

3 Ventral or abdominal pregnancy occurs as:

(a) Primary. The ovum is developed from the outset in the peritoneal cavity.

(b) Secondary. The development commences in the tube or ovary, the cyst ruptures, the ovum escapes and continues to live and develop in the peritoneal cavity.

Now, this division of the classes into varieties is valuable, and if such distinctions could be made in differentiation at the outset, before the inevitable *accident* and before the abdomen is opened, this would have practical bearings upon the prognosis and treatment; but we know that such is not the case, as the following clinical discussion will testify.

Certain conditions are distinctly surgical; ectopic gestation is

one of these. Just why it occurs, the various theories advanced have not explained to our entire satisfaction. That it does occur, and frequently, is the main fact of vital interest. Most cases are supposed to have a previous history of sterility, but that this is not invariably the rule I will show directly. The accident is most frequent in women who have never borne children; but to this also there are exceptions, showing that the impregnated ovum may pursue this erratic course and implant itself upon soil beyond the uterine cavity at all times throughout the child-bearing period.

The various points at which such an impregnated ovum may stop and begin its growth may be traced from the ostium internum of each Fallopian tube throughout the extent of their lumen; or migrating further and leaving the tube by way of the ostium abdominale, it may drop into the peritoneal cavity. There it may graft itself near the ovary, or, most likely, within the folds of the broad ligament, and from this site, as its growth advances and if the woman survives the rupture, which is sure to come, it may, at last, find its way into the retro-uterine pouch of Douglas.

Implantation, with growth of the ovum at any of these points beyond the uterine cavity, is sure to bring disaster. Those cases where gestation occurs in the proximal half of the tube seldom reach the surgeon, as they are most apt to prove fatal at the time of rupture and die without the condition being recognized or are reported by the coroner.

Ruptured ectopic gestation is a clear case of bleeding from a torn artery; and, in the light of today, should be recognized and the patient saved. Would you hesitate in the presence of a stab wound of the femoral artery, or would you cut down and tie the bleeding vessel?

The diagnosis, with the clinical picture once established in our minds, should not be difficult. In most cases there is a history of several years of sterility; then a suspicion of pregnancy; and during the early months, either with or without slight menstrual "show", the sudden occurrence of "intense abdominal pain, followed by anxious countenance, acute anemia, and collapse" (Price). Any case in doubt will become clear upon making the

incision through the abdominal wall, as the omentum will be found black—flooded with blood.

Of those cases occurring in the distal half of the tube, with growth and development there and elsewhere within the range of possibilities, two notable ones have come under by observation.

The first one was a colored woman, seen in consultation. She was about twenty-six years of age and had been married several years without any pregnancies. Her attending physician reported that she had been suffering for several days with very severe abdominal pains, and that hypodermics of morphia failed to give her entire relief. The patient's condition, when I visited her, bore out his description. I found her lying on the bed moaning with the pain and unable to keep in one position. Seating myself at the bedside, I watched her for a while. The woman seemed to be well nourished and in very good physical condition. Her eyes were clear and bright, the tongue clean, and the lips of a healthy color. The breasts gave no distinctive evidence, and there was no distention of the abdomen. The pains were distinctly recurrent and paroxysmal, the woman's attitude during the height of their intensity suggesting an expulsive character. As the wave of pain arose, the pulse would quicken, and she would change her position constantly in the bed and make very bitter complaint of her sufferings.

Upon making a vaginal examination, I found very little to help me. There was a normal virgin uterus in relatively good position. No mass could be detected on either side, and there was no marked tenderness at any given point in the vaginal vault. In passing the hand over the abdominal wall the sensitiveness of the left side was slightly more marked, but in the general hyperesthetic state of the woman this gave little guide as to any localized focus or point for attack.

The woman's menstrual periods had been fairly regular, some pain at each time, but not excessive in degree. It was now six weeks since she had menstruated, the flow failing to appear when last due.

Believing that such was the case, I told the attending physician that the patient had an extra-uterine pregnancy, and advised an

immediate operation for her safety and relief. In sheer desperation my diagnosis was accepted, and on the following morning she was placed on the table in a negro cabin.

The abdomen was opened in the median line. Upon introducing the exploring finger the uterus was found and normally located. The tube and ovary of the right side were free and normal. On the left side the tube and ovary were fixed to the pelvic floor, and at about the middle the tube was expanded and occupied by a gestation sac, about the size of a walnut. This was on the point of rupture, which occured almost as soon as the fingers came in contact with its presenting surface. Accompanying the rupture, there was escape of a small quantity of watery fluid. Fearing hemorrhage, I at once enlarged the rupture opening and removed from the cavity a spongy mass entire, which proved to be a complete placenta about the size of a silver dollar, with normal uterine and fetal surfaces. No fetus was found.

Placing a silk ligature about the tube, close to the fundus, and also one near its distal extremity beyond the point of expansion, I excised the portion of tube between the ligatures. Feeling that I had accomplished my object in removing the product of conception, no attempt was made to loosen the ovary from its fixed position to the pelvic floor.

Inspection of the portion of tube removed confirmed the feel it had given to the fingers, viz., that it was an expanded Fallopian tube, having harbored a gestation sac and being on the point of rupture.

Being in some doubt as to the perfect toilet of the operation, and for the sake of safety, a gauze wick was carried down to the site of removal and brought out at the lower portion of the incision. Above this point the abdomen was closed, with interrupted through-and-through silkworm gut stitches.

The gauze was removed after twenty-four hours, and from this time on granulation was rapid and healthy. The upper portion of the wound united by first intention, the stitches being removed on the tenth day. The patient's recovery, with immediate relief of distressing sysptoms, was practically uneventful.

This case seems to me to be of interest for several reasons:

Thus the gestation could not have been more than six weeks advanced, and up to the time of writing this, I had seen no report of so early a case. Again, the diagnosis was necessarily made from the rational signs only, guided chiefly by the *recurrent and paroxysmal* character of the pains, which were exaggerated, no doubt, because of the erratic location of the gestation sac. Finally, this case leads us to believe that it is an *inherent power of the ovum,* and not the peculiar structure of the uterine walls which causes the *normal, rhythmic contractions* of pregnancy and childbirth.

The second case was a much simpler one, inasmuch as the diagnosis, at the time of my visit, was comparatively easy. The patient was white and about thirty-five years of age. She had given birth to seven children, and at the time of this accident there was one child two years old, just weaned.

I was asked to see her in consultation at her home, nine miles in the country. The history given was that some weeks before, while in town, she had a sudden, severe pain in her "stomach" followed by a "fainting spell". She was given a sedative and ordered to keep quiet for a while before being taken to her home. Since that time she had, for the most part, been confined to her bed, with frequent recurrence of "fainting spells", either after or without much exertion. Having a child at the breast, the irregularities in the menstrual flow, or even its seeming absence, had given no solicitude, and she had not believed that she was pregnant.

At the time of my visit she looked as one who had lost much blood; the face was blanched, the pulse quick and thready, and the slightest exertion would cause a "fainting spell".

Upon physical examination, the abdomen was found to be somewhat full and very sensitive. Entering an ample vagina, the finger detected a uterus which had the feel of a subinvoluted rather than of a pregnant one. On either side of the cervix throughout the vaginal vault there was a fullness, somewhat like that of a presenting bag of waters, although of rather more resistance; while behind the cervix, bulging well down from Douglas' pouch, and covered only by the retro-vaginal wall, was un-

mistakably either the leg or the arm of a fetus four or five months advanced.

The diagnosis of extra-uterine pregnancy being concurred in by the attending physician, the gravity of the woman's condition was explained to her and her family, and it was decided to remove her to the Twin-City Hospital. Being nine miles distant and a very rough road to travel, this was rather a serious matter for a woman almost in collapse. However, with stimulants and careful driving, it was accomplished, the patient reaching the hospital in safety. Although it was near midnight, no time was lost in preparing her for operation.

With a pair of long, half-curved and sharp-pointed scissors the vaginal vault was punctured just behind the cervix, and just where could be felt the presenting part of the fetus. Introducing the fingers of the left hand and exchanging the sharp for blunt-pointed scissors, this opening was rapidly enlarged to each lateral wall. To grasp its lower extremities and deliver the five months' fetus through this opening was a very quick and simple matter, and one that was accompanied by an immense gush of black fluid blood and clots. The quantity of this I am afraid to estimate, but it was very large, being the accumulation of several weeks' hemorrhage.

Being told that the patient had no pulse, I asked that she be given some salt solution, and working as rapidly as possible, by passing my hand well up into the cavity, which was on the right side of the uterus, I emptied it of blood clots and cleared away as much of the placental growth as seemed consistent with the safety of the structures to which it was attached.

The flow of black blood was really alarming, and several times the patient was thought to be dead; but I irrigated the cavity with several gallons of hot saline solution and, finally, by using very long and rather heavy wicks and carrying them high up, I packed it pretty full of gauze. She was taken from the table breathing occasionally and with a very feeble pulse.

For several days and nights after this it was a case of anxious watching and waiting, as the thread of life had been stretched to a very small filament indeed. Stimulants were given constantly,

and the cavity was irrigated once or twice in each twenty-four hours with several gallons of hot normal saline solution, until at last the glimmer of hope on the faces of the faithful nurses who had given me their help was also shared by me.

A most interesting feature in the after care of this case was the sympathetic involution of the uterus, as this process progressed in the neighboring structures where the gestation had occurred.

Beginning soon after the removal of the fetus, at each irrigagation there would be quite a free and pinkish flow, just like the normal lochia, from the mouth of the uterus. This continued for about ten days, gradually lessening in quantity, and finally bringing away shreds like cast-off mucous membrane. During this time the entire uterus diminished much in size and the cervix lost its full, congested appearance.

The recovery of this patient was very slow and tedious, but after five weeks in the hospital she returned to her home in pretty good condition. Within the eighteen months following this accident she conceived, and carried a normal pregnancy to the seventh month, and from that time her health has been most excellent.

This case is an exception to the rule that ectopic gestation occurs either in women who have never borne children, or that its occurrence is preceded by a prolonged period of sterility. It also seems of interest because of the unmistakable history, which, coupled with the physical examination at the time of my visit, made the diagnosis comparatively easy, and also made us feel very sure that, in spite of her condition being almost one of extreme collapse, operation was the only available means for the safety of the patient.

Removing the fetus through the vaginal vault was not the method of choice, but the patient was *in extremis,* and this seemed really the quickest way and the one which nature had pointed out for her relief.

Going in from above and making a clean removal of the ruptured tube, with safe ligation of all bleeding vessels, would have been a much more complete operation, lessened the subsequent

dangers, and greatly hastened her convalescence, provided she could have survived the more prolonged tax on her vitality. This was the question confronting me, and while I did not favor the vaginal route, I felt that I must defend not only a principle and a preference, but the life of my patient as well.

Since the report of these cases and in later years I have had a number of cases of ectopic gestation, all of which were operated on through an abdominal incision, and the subsequent histories of almost all have been satisfactory.

Two, however, were of unusual interest—one of these because of a recurrence in the opposite tube within a few years. In this case I was severely reproached by the patient for not completing my work at the former operation. The other one ended in a double tragedy. The mother had gone some weeks beyond full term, when I removed a fine, living boy from the abdominal cavity. He was handed over to the nurse, but lived only a short time. As the placental growth was deep and extensive, after weighing well the risks, I determined to attempt its removal rather than to subject her to the dangers of sloughing and infection; but the shock and the hemorrhage were too great, and the end came before she was removed from the table.—*International Journal of Surgery.*

Extracts from Home and Foreign Journals.

SURGICAL

The Pfannenstiel Incision.

Dr. M. v. Holst (*Münch, med. Wochensch.,* No. 17, 1912) is strongly convinced of the value of the transverse fascial incision of Pfannenstiel in abdominal surgery. Up to the close of 1911 he employed this method in 450 cases. Of these 250 were later examined and it was found that hernia occurred in none of those healing by primary union and in only 1 per cent of those healing by granulation. Such a result had not been previously obtained with any other method of opening the abdomen. The objection made against this method, that it does not permit of a good view of the field of operation, was not found to be justified; in fact, the contrary obtained. It was found possible to remove tumors as large as a man's head without any special difficulty. One of the important advantages is that the intestines are not likely to protrude, and therefore are not exposed to drying, cooling or contact. In closing the abdominal incision the peritoneum is united with a running suture of iodin catgut and the recti with iodin catgut button sutures, while the external wound is closed with thin silk button sutures. This method permits the patient to get up early after operation, usually on the fourth day.—*International Journal of Surgery.*

Postural Prophylaxis of Postoperative Complications.

Wagner protests against waiting for complications to develop before raising the patient's shoulders. He thinks this should be done systematically after all major operations, whether done with general or local anesthesia. He generally raises the head of the bed four to sixteen inches and he has not lost a patient from post-operative pneumonia since he has been doing this. Children are

particularly grateful for being allowed to partly sit up, and young and old benefit alike. He raises the foot of the bed when there has been much loss of blood, and states that nothing else has such a marked influence in bringing the pulse up, sometimes accomplishing this when stimulants and infusion have all failed. In case of postoperative paresis of the bowel, turning the patient from his back on his side will often work wonders. A change of position is also often of supreme benefit in case of dilatation of the stomach and distention with air. The foot or head of the bed can be raised with the patient lying prone. This proved particularly effectual for a large abscess in the mediastinum. The abscess was drained and it promptly healed as the patient lay on his stomach with the foot of the bed raised. In no other position would it have been possible to prevent the spread of the pus inside.—*The Journal of the American Medical Association.*

Disinfection by Iodin.

The antiseptic preparation of an operative site with tincture of iodin has become so much the fashion that any little hint relating to its successful application must prove useful to many of our readers. An argument against the method is the irritation produced, ordinarily slight, it is true, but sometimes very pronounced, occasionally and unexpectedly serious.

The preventive consists in applying to the painted region a 5 per cent solution of hyposulphite of sodium. After the application of iodin, the surface is covered with a layer of absorbent cotton, and about five minutes later the cotton is soaked with the sulphite solution, warmed to about 104°. The iodin is changed to iodide of sodium by the solution, which removes the irritation, and, being itself practically a physiologic solution, it is painless even to wounds or to tissues other than the skin.

The idea is to be credited to Prof. L. Sabbatini, of the University of Padua.

It is both simple and efficient in practice.—*New Orleans Medical and Surgical Journal.*

The Pathogenesis, Anatomy and Cure of Prolapse of the Rectum.

(Alexis V. Moschcowitz, Surgery, Gynecology and Obstetrics, July, 1912.)—Prolapse of the rectum, according to Moschcowitz, is in every essential a hernia. Only from this viewpoint can an intelligent method of cure be arrived at. The ordinary methods invariably fail because they do not take into account the correct pathological and anatomic conditions. The transversalis fascia is the important factor, as it is in the formation of any hernia. The pelvic part of the transversalis fascia sends an outward prolongation upon the rectum, upon which it gradually becomes lost. Increase in abdominal pressure, such as straining (secondary to heavy work, parturition, habitual constipation, coughing, phimosis, vesical calculi, stricture of the urethra, etc.), which will drive the peritoneum into the sheath formed by the outward prolongation of the transversalis or pelvic fascia, is the exciting cause of the acquired form of prolapse of the rectum. The author does not deny, however, that there may be, as in other hernia, also a congenital variety. The peritoneum, covering the anterior surface of the rectum, is intimately adherent to it, which accounts for the fact that in the prolapse of the rectum, although a true hernia, we do not find a distinct and separable sac. In other words, the hernia is exactly analogous to the so-called "hernie par glissement." The correct treatment is an operation in which the principles of an operation for the cure of a hernia can be carried out. This the author has devised and performed on eight cases during a period of six years. The technic is, briefly, as follows: Median abdominal incision with the patient in the Trendelenburg posture. The rectum is pulled up and held taut. Pagenstetcher or silk sutures are then passed circularly around the culdesac of Douglas, beginning below at a point one inch above the inferior extremity of the cul de sac (and the Douglas may be found surprisingly deep in some cases). Similar sutures, six to eight in number, are passes at intervals, and persisted in as long as the peritoneum comes together until practically the entire pouch of Douglas is obliterated. In the female several of the sutures may

be anchored to the supra-vaginal portion of the cervix and body of the uterus. When approaching the rectum, the sutures coming from the sides of the pelvis, catch the serosa covering it in firm and close stitches. This is done to prevent the possible formation of a hernia; in addition these lateral sutures also materially aid in fixing the rectum to the sacrum and coccyx. The uterus and internal iliac vessels should be guarded against injury. The after treatment is practically that of any laparotomy. Morschcowitz has had ideal results in the eight cases operated by him.—*The Medical Fortnightly.*

Intraperitoneal Application of Camphor Oil.

Hirschol first mentions the current interest shown by gynecologists on this subject. Through multifold administration, improvements, etc., excrescenses have developed upon the original idea which threatens to lead to its abolition. The author is convinced from his own experience of the excellence of this resource. In 1907 he recommended the 1 per cent camphor oil in actual peritonitis upon the theory that the oil sealed up the lymphatic openings and thereby prevented the absorption of toxins. He is not shaken in his conviction by the adverse criticism. The peritoneal cavity is mopped clean of pus with gauze strips, the oil applied throughout and the abdomen closed down to the drainage tube. The amount of oil used may reach 200 or 300 c.m., but quite a percentage of this escapes before the abdomen is closed. The actual quantity of camphor in the oil is about 2.5 grams at the most. The camphor acts as an analeptic, and it is no longer necessary to inject it subcutaneously after operating. Nothing could be gained by increasing the amount of camphor. Hochne and others, however, have used as high as 10 per cent camphor oil in the belief that a reactive peritonitis is set up with destruction of bacteria. No toxic consequences have been noted, but delicate subjects have exhibited pallor, sweating, and even fainting. For this reason a return to weak concentrations has been urged, and none too soon, for very recently a death has been attributed to the 10 per cent oil. The ability on the part of the oil of prevent-

ing adhesions has not been insisted on, but that it sometimes has this effect seems certain. Since these cases of peritonitis may end fatally autopsy evidences are forthcoming, and the author has thus been able to convince himself that the oil may prevent the adhesions. The fallacy of assuming that oil or any other influence can prevent adhesions is apparent in the fact that the latter do not always form if the case is left to itself. Quite recently Novak has sought through results of animal experiment to show that the oil prevents adhesions, but the opposite conclusion was forced upon him. Novak sought to eliminate the peritoneum by leaving the cavity denuded to a considerable extent, but adhesions still developed.—*Medical Record.*

OBSTETRICAL

Construction of an Artificial Vagina From Small Intestines.

In *Weiner Med. Wochensch.* No. 49, Dr. Halban is reported to have constructed an artificial vagina from small intestine. After performing laparotomy he incised the peritoneal fold between the bladder and the rectum and then separated the bladder from the rectum as far up as the vaginal *cul de sac.* He then excluded a section of the small intestine and united the central and peripheral portions of the gut by lateral anastomosis. Then he implanted the excluded intestinal segment into the vulva and sutured the incised peritoneal fold leaving an opening for the passage of the mesentery of the implanted segment of gut. Lastly he enlarged the vaginal opening and sutured the gut into position. The operation proved a success from a functional point of view. —*Buffalo Medical Journal.*

Operative Treatment of Postpartum Hemorrhages.

Dr. E. Kehrer (*Münch. med. Wochen.*, No. 16, 1912) in a case of severe atonic hemorrhage successfully employed the fol-

lowing procedure: The abdominal cavity was opened by a short longitudinal incision and the uterus drawn out. An assistant quickly constricting with the hands the isthmus region and the uterine and spermatic arteries, a double silk thread was inserted first on one side and then on the other from below upwards through the fascia, parietal peritoneum near the upper angle of the wound, and the parietal peritoneum and fascia in the lower portion of the abdominal incision. By tying this double thread the round ligaments, uterine vessels, lateral portion of the cervix, infundibulo-pelvic ligaments and spermatic vessels were secured, while all the lateral vessels of the internal genitals were ligated with a thick ligature. By means of a third and fourth suture at the lower and upper angles of the wound the anterior and posterior wall of the cervix was fixed to the peritoneum and fascia, except a small place which later was closed with catgut. The fundus was removed with Paquelin or knife, and the cutaneous incision closed by the application of Michel's clamps. The operation could be quickly done, only three minutes being consumed in applying the lateral ligatures and only ten in the entire procedure. During the abdominal incision the median basilic vein was exposed by an assistant, and immediately after ligation of the two lateral uterine ligaments an intravenous saline infusion of about 1,000 v.cm., with addition of 0.4 synthetic suprarenin, was given.—*International Journal of Surgery.*

Berberine in Feeble Labor Pains.

On page 21 of No. 3, Volume IV, of Helpful Hints for the Busy Doctor, is a report of the use of berberine in feeble labor-pains, and a request for other reports. I give the following:

I was called at 4 p.m. to see Mrs. G., age 24, mother of one child, who had been bothered with slow, ineffective labor-pains for about ten hours. At 4:30 I ordered the nurse to give two granules of 1-6 grain berberine hydrocloride each, or 1-3 grain. This was followed in 15 minutes by another dose of the same size. and a third twenty minutes after the second. There was no need for another, and at six o'clock we have a fine nine-pound boy.

The story is not through yet, for, as I took hold of the uterus to aid in getting the placenta, I found it hard. The rush of blood following the delivery of the placenta, which is so often seen, was not present and there was no subsequent bleeding. On the tenth day the patient was up and in the best of condition. I can imagine a case where too violent contraction might be of a disastrous nature, but I expect to use berberine in all labor cases henceforth and govern the dose by the case.—*The American Journal of Clinical Medicine.*

Metrorrhagia Due to Atheroma of the Uterine Vessels.

Metrorrhagia is essentially a symptoms of some pathologic condition, either general or local. One should determine the pathology, then apply treatment. The routine curetting of all cases, regardless of pathology, without the most careful examination of the scrapings, is to be deprecated. Many cases of suspected malignant disease are found on operation to be cases of selerosis of the uterine vessels. Patients are usually nearing the climacteric, when we may be on the lookout for malignant diseases,; or their general arterial system may give evidences of early arterial changes. That we do find definite changes with hardening of the uterine vessels both grossly and microscopically is a fact. That this change is, strictly speaking, a sclerosis rather than a true atheroma is shown by microscopic findings. Medication internally or topically is of no avail. Hysterectomy is the only rational treatment, and that should be performed as soon as the diagnosis is made and before the uterine vessels have become so brittle that ligating is unsafe.—*The Journal of the American Medical Association.*

Treatment of Uterine Hemorrhage.

Whitehouse remarks that in the treatment of uterine hemorrhage, the first consideration is proper diagnosis, and individual treatment will depend on the conditions revealed. Where the

bleeding is due to a high arterial pressure, the tension must be reduced by means of purgation, nitroglycerin and dieting. Purgation will also be found of value in depletion of portal circulation where hemorrhage results from hepatic cirrhosis. Should the calcium index be low, menorrhagia will be helped by the administration of this agent, preferably in the form of a lactate. Intrauterine applications, such as hydrogen peroxide and protargol, have given good results in cases of bacterial infections. Treatment in these cases must be long and thorough.—*Pacific Medical Journal.*

Severe Gestation Toxicoses.

Freund reports four cases of severe toxicosis at the close of gestation, the latter having been uneventful throughout. Two patients had manifest eclampsia, the cases ending fatally. In a third fatal case the cause of death is given as latent eclampsia. The fourth patient recovered and had no cerebral symptoms at any time. Not only this patient, but two of the others presented the picture of severe hematogenous icterus. In all the fatal cases there was acute hemorrhagic diathesis. The infant in the recovered case was born with evidences of a toxicosis, notably prolonged somnolence, but eventually rallied. The author is an adherent of the unicistic view, which assigns the morbidity of pregnancy to one single cause or cause nexeis. Attempts to estimate the severity of the toxicosis *intra vitam* by urinary studies are unsatisfactory. Autopsies alone throw light on these cases, and even then, owing to the great number of fins, the evolution of the malady can not be fully traced. A diagnosis of latent eclampsia is hardly justifiable without autopsy. If we then find all the lesions of manifest eclampsia present the diagnosis is warranted. Authors have erred at times, says Freund, in representing severe toxicoses as something apart from eclampsia, when the latter was merely latent clinically. The writer has nothing to say of those fatal toxicoses which occur early in pregnancy, in which a diagnosis of latent eclampsia would be absurd. On the other hand, all toxicoses at term would necessarily be regarded on all sides as eclampsia in character.—*Medical Record.*

MEDICAL

Treatment of Arteriosclerosis.

Hochhaus mentions the frequent inherited tendency to this affection and also its dependence on a number of individual factors. The earliest symptoms often appear when it is too late to arrest the disease. All the possible causal moments must be eliminated one after another, as the excessive use of alcohol, tobacco, and coffee. Physical or mental over-effort must be offset by rest, work being restricted in duration and intensity. The ideal state to be attained is one of quiet activity. The patients are naturally excitable, and this should not be aggravated by worry or foreboding. The question of diet is a vexed one and the best course is to avoid any kind of extremes. This applies also to the ingestion of fluids. As a rule, this should amount to 1500 c.c. As for drugs, there are no specifics, but iodine approximates one. It unburdens the circulation in some unknown manner. Nothing is gained by giving large doses. The value of the nitrites and nitrates is questionable because they are not really indicated. The author does not believe that it is necessary to lower the blood pressure save on special occasions. The balance of the treatment is chiefly hygienic, comprising hydrotherapy, massage, etc. Many indications are not due to the disease, *per se*, but to its complications, as nephritis. The high-tension current is not even mentioned.—*Medical Record.* L.

Diagnosis of Duodenal Ulcer.

As a general rule it may be stated, says Herschel, that the symptoms of duodenal ulcer are those which were formerly at first called acid dyspepsia, and more recently hyperchlorhydria. The writer thinks, however, that we are not justified in the assertion recently made by Monyihan, of Leeds, in a monograph upon duodenal ulcer that "persistent hyperchlorhydria is the medical term for the surgical condition duodenal ulcer. We undoubtedly find symptoms, which in practice can not be distin-

guished from those of duodenal ulcer, in chronic gall-stone disease, and in chronic appendicitis; and there are most certainly both a condition of hyperchlorhydria due to proliferative gastritis and also one which is a purely nervous condition. Nevertheless, the fact remains, and this is as far as the writer thinks we are justified in going, that there is a group of different affections comprising those enumerated above which are characterized by the symptom-complex to which stomach specialists for the last ten years have given the name of hyperchlorhydria, and that of these duodenal ulcer is by the far the commonest.—*New Orleans Medical and Surgical Journal.*

Is Cancer Contagious?

Gaston Odin, of Paris, recently declared that he had solved the mystery of cancer by discovering its microbe.

Doctor Odin's discovery is vouched for as authentic by Professor Matruchol, head of the cryptogramic botany section of Sorbonne University, and is hailed by Professor Lannois of the School of Medicine as a remarkable discovery.

Doctor Odin says he not only found, but succeeded in isolating and cultivating the microbe, which is a blood microbe. It is a parasitical organism, transforming, developing and reproducing itself in a variety of forms passing imagination. No pronouncement on the discovery has yet been made by the medical profession generally, pending the receipt of further details, but Doctor Odin is confident a serum he has prepared will do for cancer what Jenner's vaccine has done for smallpox.

One of the most startling statements made by Doctor Odin is a warning against contact with cancerous people, saying cancer is as infectious as any other microbe disease.—*Pacific Medical Journal.*

Diet in Biliousness.

Fenwick remarks, in *The Practitioner,* that there are two principal complaints to which the term biliousness is commonly ap-

plied, the first of which is characterized by the irregular recurrence of certain gastric phenomena designated "a bilious attack," while in the second a complex form of dyspepsia, accompanied by a deficient excretion of bile, is popularly referred to as "chronic biliousness." In the treatment he says that the diminished functional activity of the biliary and pancreatic secretion necessitates the careful selection of a dietary. Excess of starchy material should be omitted in favor of partially predigested cereals and sugars, and, consequently, toast is to be preferred to bread, and the various pancreatized and malted foods to oatmeal, tapioca or sago. Potatoes do not disagree during the earlier stages of the complaint, but uncooked green vegetables and fruits always produce flatulence. Owing to the usual existence of hyperchlorhydria, milk is readily digested when diluted with lime water, and from two to three pints may be allowed during the twenty-four hours. Cream is often distasteful, and fresh butter may be digested with difficulty. Lightly roasted beef and mutton may be allowed once a day, while pigeon, chicken, game, white fish, tripe, sheep's brains and sweetbreads are good substitutes for the less digestible forms of butcher's meat. Veal, pork, and meat fat must be avoided, and bacon and ham be tried with caution. Eggs are particularly injurious in many cases.—*The Medical Brief.*

Editorial

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All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

Enlightenment of the Public as a Means of Controlling the Milk Supply.

We notice in the Lexington Leader, which paper is published at Lexington, Ky., something which was new to us, though it may be old to others. However that may be, it struck us as an excellent means of improving the milk supply in any city. It was nothing more nor less than the publication—statistical wise—of the relative numbers of bacteria per cubic millimeter of milk in samples taken over a given period of time from the local dairies. These statistics were arranged in table form so that a mere glance would tell the reader which dairies were supplying the best milk so far as bacteria were concerned. It struck us that similar tables could be published by local health officers which would show on different days not only the bacterial counts in the milk from different dairies but also the proportion of cream in whole milk, cream in milk, fat in cream, solids in milk and in short, all features of good and bad dairy supplies. Such tables published weekly in the daily papers with the dairymens' names opposite the tell-tale black line would do much toward improving the dairy supply.

Some such measure is highly desirable in the towns and cities of Tennessee, where, unfortunately, for the welfare of the people the dairymen have a combine with attorneys and money enough behind it to fight any measure which promises to cause them more expense and trouble. The average milk supply in Nashville at any rate is far from being good, and we imagine it is little better in the other cities in the same State.

If the health officers in the different cities had these statistical tables published in the daily papers we feel that public opinion would soon rectify an evil which so far has almost entirely eluded legislation. W. T. B.

Spanish Medical Court of Honor.

The Berlin Medical Court of Honor has long been in existence and its findings watched with interest. It now develops that there is one in Spain. Not long since a Doctor in Barcelona published a book which gave offense to his fellow practitioners. They promptly met together in the capacity of a "college" and decided that the publication of the book constituted a case of infamous conduct in a professional respect and sentenced the writer to be public reprimanded. The author, however, did not submit tamely to this procedure and appealed to the civil court, which revoked the sentence and gave judgment in favor of the accused. The "college" then appealed to the Supreme Court, claiming that it was a court of honor and independent of the provincial court of law. The Supreme Court promptly decided in favor of the "college", which was declared to possess the power of controlling its own professional members. Though entirely ignorant of the crime committed by the publisher not having seen what was written it is satisfactory that the "college" has the power to act as a professional court of honor in dealing with its own members independently of the courts of law.—*E. S. McK.*

Etiquette Essential in Medicine.

An interesting case was up before the last Bedford Assizes. It was a case of supersession. The superceded medical man wrote the other a letter to the effect that in consequence of the others (plaintiff) conduct his colleagues would refuse to meet him, and that as such an allegation constituted an attack upon him in respect to his occupation, it justified, unless a well founded, more than nominal damages. Plaintiff was awarded fifty pounds damages. The case brings up the question, what should a practitioner

do when called in to attend a patient in an emergency or in the commencement of a new case whose name is on the books of another practitioner. On the behalf of the plaintiff it was argued that the rule is for the succeeding practitioner, as soon as the immediate need of his services are over to suggest to the patient his retirement in favor of the former medical attendant, but that if the patient requested him to remain in charge he is at liberty to do so, and need take no further step in the matter. On behalf of the defendant it was argued that though a medical man is at liberty to attend the patient of another medical man if the patient definitely asks him to do so, yet he should not only suggest retirement but should write the superceded practitioner explaining the circumstances.—*E. S. McK.*

Summer at Sitka.

Sitka, the quaint old Russian capital of Alaska, was the site of a pleasant summer season by the writer quite recently. This is a town of eleven hundred persons, eight hundred of whom are Indians. It is on Baranoff Island and situated west of Southeastern Alaska. It thus receives the full benefit of the modifying influence of the Japanese current. The temperature in the winter rarely reaches zero. The weather is cloudy and the rainfall is heavy. Were it not for this much more garden truck could be raised. However, some such as cabbage, potatoes, cauliflower, red raspberries and cherries were ripened on the bush and tree as late as September 1. The Sheldon-Jackson School is a large and well supplied establishment for the native Indians situated at Sitka. It was started by the man it is named for, who was later Commissioner of Education for Alaska. It is doing an excellent work. There is a hospital connected with this institution which, strange to say, has not had one patient in its twenty beds for over a year. The medical care of the city and school is in the care of Dr. Johnson and Nurse Gibson. With cheaper and more frequent boats, better and more numerous hotels, there is no reason why the beautifully scenery and the delightful and healthful summer climate of Alaska might not be enjoyed by many more—.*E. S. McK.*

NEW YORK SKIN AND CANCER HOSPITAL,
Second Avenue, Cor. 19th St.

The Governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will give a fourteen series of Clinical Lectures on Diseases of the Skin, in the Out-Patient Hall of the hospital on Wednesday afternoons from October 30 to December 18, 1912, at 4:15 o'clock. The course will be free to the medical profession on the presentation of their professional cards.

CHARLES C. MARSHALL,
Chairman of Executive Committee.

AN APPEAL.

The Woman's National Wilson and Marshall Organization appeals to women everywhere for aid to carry on its propaganda on behalf of Governor Wilson's candidacy. It is endeavoring to raise $10,000 in subscriptions of $1 and upward. It believes that the bulk of the women of the country, like its men, honor Governor Wilson for his many achievements in New Jersey, particularly those on behalf of women and children, and see in his election the best promise of relief from intolerable tariff taxation and of freedom from boss rule. Long political experience has shown that what is best for all the people is best for any class of it, whatever special grievance that class may have. Governor Wilson's political courage, sanity and progressiveness afford the surest guarantee that the interests of women and children will find, under his presidency, their greatest recognition and advancement.

The Woman's National Wilson and Marshall organization, in addition to its other services, is assisting the Democratic organization by maintaining a Bureau of Health Conservation, of which Dr. Harvey W. Wiley is President, Professor Irving Fisher is Vice-President, and Mrs. Borden Harriman is Secretary. This Bureau is bringing before the country Governor Wilson's admirable position with respect to the protection of workers in dangerous industries, and the pure food question.

Subscriptions may be sent to Mrs. Borden Harriman, President

of the Woman's National Wilson and Marshall Organization. Room 1058, Fifth Avenue Building, New York, N. Y.

"War of Wealth Against Health."

Dr. Harvey W. Wiley declares the most important campaign document yet issued by the Democratic National Committee is a booklet prepared for the Woman's National Wilson and Marshall organization. It discloses some new and startling facts in connection with the long fight for pure food. It shows how the efforts of the Bureau on Pure Food were blocked by the administrations of both Roosevelt and Taft. These booklets are going to be distributed this year throughout the country by the Democratic National Committee.

In the booklet Mrs. Borden Harriman, President of the National Organization, makes a strong appeal to the women of the country in which she says:

"No subject is more vital to women than health in the home. No function is so essentially the women's function as the protection of the food supply, the protection of sanitary and hygienic working condition and the general conservation of human life. I therefore appeal to the patriotic women of America for their active participation in the present great fight which is being waged by the Wilson and Marshall campaign in behalf of these measures."

The General Federation of Women's Clubs at the biennial conference held June 26-July 6, declared that "the administration of the Department of Agrculture has been and is such that at present the law is prostituted for the benefit of the special interests and the welfare of the people is ignored," and adopted a resolution calling upon the President to "so organize the Department that the Food and Drug Act shall in the future be honestly administered in the interest of the consumers of the Nation."

The operations of the "Invisible Government" in permitting the adulterators of foods to go unprosecuted and thus protecting the interests, is reviewed, and the situation is summed up as follows:

"The law as passed by Congress was intended to be administered in the interest of the consumer. The law as modified by the executive orders of President Roosevelt and President is devoted almost exclusively to the protection of the pocketbook of the producer, showing the triumph of mercenary interests over the welfare of the public."

ASSISTANT IN EXPERIMENTAL THERAPEUTICS (MALE).
Philippine Service. October 11, 1912.

The United States Civil Service Commission announces an open competitive examination for assistant in experimental therapeutics, Philippine Service, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in the position of research assistant in experimental therapeutics in the Bureau of Science, in Manila, Philippine Islands, at a salary of $2,000 a year, and vacancies as they may occur requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

It will not be necessary for applicants to appear at any place for examination. Their eligibility will be determined upon the evidence furnished in connection with application and examination Form B. I. A. 2, concerning their training and the work which they have accomplished.

Applicants must be graduates in medicine, and in addition must show at least one year's postgraduate experience in conducting laboratory research work in experimental therapeutics, or, as equivalent to the year's work, they may submit copies of publications prepared by them, evidencing their ability to carry on original experimental work. A person is desired who is especially qualified in research, and it is stated that, for one who is satisfactory, the prospects of promotion are excellent.

Statements as to training, experience, and fitness are accepted subject to verification.

Applicants must have reached their eighteenth but not their fortieth birthday on the date of the examination.

The medical certificate on Form B. I. A. 2 must be executed by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian, or Public Health and Marine-Hospital service. If such an officer can not be conveniently visited, a pension-examining surgeon may execute the certificate. Special arrangements have been made with pension-examining boards throughout the country to give such examination for a fee of $2, to be paid by the applicant. This certificate must not be executed by the family physician of the applicant. The medical officer should indicate his rank or official designation on such certificate. When it is impracticable, by reason of the applicant's distance from a Government physician or a pension-examining surgeon, to have the medical certificate executed by such physician, it may be executed by any reputable physician. Such persons may be required to undergo another examination in case of appointment.

Each applicant will be required to submit with his application a photograph of himself, taken within three years, which will be filed with his papers as a means of identification. An unmounted photograph is preferred. The name and date of examination, the competitor's name, and the year in which the photograph was taken should be indicated.

This examination is open to all male citizens of the United States who comply with the requirements.

Special attention is invited to the favorable conditions in respect to transportation, leave of absence, clothing, etc., in this service, printed hereon.

Persons who comply with the requirements and desire this examination should at once apply for Form B. I. A. 2 to the United States Civil Service Commission, Washington, D. C.; the secretary of the board of examiners, postoffice, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawai,; old customhouse, St. Louis, Mo.; or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, including the medical certificate,

and filed with the Commission at Washington prior to the hour of closing business on October 11, 1912. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

Issued September 16, 1912.

Those Who Dread Its Approach.

There is this to be said to those who are dreading middle age, writes Lillie Hamilton French in the October "Century," discussing the passing of "Old Ladies," old ladyhood is really one of the most comfortable and delightful of estates. Enter it frankly with eyes open to facts, not regretting the things left behind, but rejoicing in those no man can take from you, and you will not want to be a girl again or envy your younger sisters their raiment and successes. You can be an onlooker; they never can. You have fought your battles; they have theirs to win. You have established yourself in the world's opinion; everybody doubts their stability. You know life; they are still confused by the labyrinth of its unexpected turnings.

You can have friends, unquestioned and uncriticized, a privilege denied them—friends old and young, rich and poor, men as well as women. You can dare say that you like them and still be unafraid. For the first time in your life, too, you will be nobody's rival. Jealousy, with its little sting, can not harm you.

Reviews and Book Notices

Surgical Clinics of John B. Murphy, M.D., at Mercer Hospital, Chicago. Vol. I, No. 4 (August). Octavo of 154 pages, Illustrated. Philadelphia and London. W. B. Saunders Company, 1912. Published Bi-Monthly. Price per year: Paper, $8. Cloth, $12. W. B. Saunders Company. Philadelphia. London.

We acknowledge with thanks to the publishers the receipt of the fourth number of the Surgical Clinics of Dr. John B. Murphy. This number is replete with practical information. As an exposition of the methods of advanced surgical work done by the distinguished surgeon it is invaluable. Among the many interesting subjects treated in this number may be mentioned the following: "Ankylosis of the Knee Joint—Arthroplasty; Joint Infection." "Nephropyeloplasty;" "Traumatic Epilepsy-Decompression;" "Transplantation of Bone;" "Carcinoma of the Lip;" "Students' Clinics—Fractures." All the clinics are interesting, but these exceptionally so. The publication of these clinics in serial form is a boon to all who are not able to sit at the feet of this great American surgeon and imbibe from his spoken words some of the wisdom that has made him great. Every surgeon should subscribe to this work, as the teaching recorded here will stimulate him to greater endeavors in the field of advanced surgery of which this master mind is an able exponent.

Muscle Spasm and Degeneration In Intrathoracic Inflammations and Light Touch Palpation—By Francis Marion Pottenger, A.M., M.D., Medical Director of the Pottenger Sanitarium for Diseases of the Lungs and Throat. Monrovia, Calif. Sixteen Illustrations. St. Louis. C. V. Mosby Co., 1912.

This exceedingly interesting brochure by a recognized authority upon pulmonary tuberculosis will create a stir and widespread interest in medical circles all over the world. The author has employed the muscle spasm and muscle degeneration of the different set of muscles concerned in the respiratory acts as important factors in the makeup of a diagnosis in both early and late tuberculosis. That the muscles are affected to a perceptible extent to the palpating finger the author shows conclusively. As to

what extent this change of condition in the muscles may serve as diagnostic points in intrathoracic diseases much will depend upon the tactile sense of those who seek for these signs. Hilton demonstrated years ago in his admirable work "Rest and Pain" this anatomical fact, viz.: That the nerves that supply a joint supply the muscles that move the joint and the skin over the joint. The same association of supply doubtless rules in the respiratory act, and the author's deductions are rational and physiological. It is surely a step forward and its further development will prove of great value to the general practitioner. At any rate the work is novel in its conception and excellent in its execution.

The Blood of the Fathers—A Play in Four Acts. By G. Frank Lydston. The Riverton Press, Chicago. 1912.

Our thanks are due the publishers for a copy of this exceedingly entertaining drama by the brilliant and versatile author, Dr. G. Frank Lydston. It is really a literary gem, and dealing as it does with vital sociological problems of the day, from a medical standpoint, it should prove of instructive interest to the physician. As the author claims in his preface, it is a plea for the control and regulation of marriage, for matrimonial discrimination, for the protection of the unborn, for the sterilization of degenerates, for the under-dog, for the salvation of the young prospective criminal, for the education of the layman in matters sociological and a protest against graft in police systems and police persecution of social outcasts. It is a powerful sermon cast in dramatic form that should carry with it lessons of the greatest importance. We congratulate Dr. Lydston upon his success in a new field.

A Text-Book of Practical Therapeutics—With especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Armory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Fourteenth edition. Thoroughly revised. Octavo, 984 pages, with 131 engravings, and 8-full-page colored plates. Cloth, $4 net. Lea & Febiger, Philadelphia and New York, 1912.

The appearance of a text-book in its fourteenth edition is a most powerful indication of its popularity and usefulness. We

regard this work in its plan and execution as one of exceptional value as a text-book for students and reference work for the busy physician. The work has been carefully revised and brought fully up to date, and it is sure to maintain its hold upon the medical world as a model treatise upon therapeutics. The author recognizes, "particularly in writing this edition, that the physician at the bedside needs and desires all the help he can get, whether it comes from laboratory experience or bedside experience, and, furthermore, wants this help in a form in which he can use it when face to face with problems which are of vital importance to him and to his patients. He not only wants to know what drugs can do good but he wants to know how to use them." A new introductory chapter has been prepared and matter dealing with recent therapeutic innovations, such as salvarsan, tuberculin and vaccine therapy has been introduced with a description of Biers' method of treatment by artificial hyperaemia. The work is as nearly perfect as a text-book can be made and meets all the requirements of up-to-date medical practice.

Publisher's Department

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in insomnia resulting from various causes. The objectional taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldeyd (see page —, this issue) which is an elegant preparation.

The Control of Pain.

The work of the conscientious physician is many sided and diverse, but no part or detail of his manifold duties is ever more obligatory or imperative than the control of pain. In the presence of physical suffering any other consideration than its prompt and positive relief, with rare exception, becomes of secondary importance. But insistent and pronounced as the physician's duty aldays is to control and assuage the pains to which human flesh is subject, it should ever be his aim to accomplish this noble purpose in the best, as well as in the quickest possible way. Other-

wise, with regard only for a patient's comfort, it is extremely liable that the agencies of relief will be attended by consequences serious in the extreme and not infrequently more harmful in effect than the original pain itself.

The foregoing has particular significance for the cautious physician, in asmuch as he has in Papine a pain-relieving measure that enables him to control pain promptly and effectively, with the least possible untoward action. Representing as it does all the anodyne properties of the most potent opiate, but with the usual objectionable features reduced to a minimum, Papine is undoubtedly the most efficient analgesic at the command of the profession. Compared with the useful opiate, Papine will be found much more free from those disagreeable effects ordinarily considered inseperable from preparations of opium, such as constipation, nausea, gastro-intestinal derangement, and tendencies toward habit formation. Thus it can be employed in a wide variety of conditions with confidence, not alone in its anodyne and sedative action, but equally in its avoidance of disagreeable or unpleasant by-effects. In brief, Papine is the ideal preparation of opium, presenting all the advantages of this well-night indispensable drug with its nauseating, constipating and habit-forming tendencies reduced to a minimum. Innumerable physicians use it to the exclusioin of all other opiates, since it enables them to secure all of the well known benefits of the most poten opium derivative—with gratifying freedom from the usual disadvantages.

GYNECOLOGIC THERAPEUTICS.

The tremendous growth of gynecology in recent years has been confined especially to surgical therapeutics. Even Skene several years ago regretted that medical treatment of female disorders does not receive its merited attention. The practitioner is, therefore, compelled to rely chiefly on remedies which have been tested by clinicians with years of experience having the best opportunity for observation. The most frequent diseases of women are those that arise from functional disturbances of the pelvic organs. For these we call the attention of the medical profession to Dioviburnia, a combination of vegetable drugs, which has stood the test of many years as an efficient tonic and sedative to the female generative organs.

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Albuminate of Iron is a definite chemical compound of albumen and Iron. In the manufacture of the preparations of this iron salt, we use fresh egg albumen only. Albuminate of Iron is the organic compound present in the red corpuscles of the blood. **It does not disturb digestion, neither does it constipate.** Contains in each teaspoonful one grain of the Iron salt, and itis perfectly stable and bland. Clinical experience has demonstrated its superiority as a chalybeate.

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As a Uric Acid Solvent it is indicated in **Rheumatism, Gout,** in **Phosphaturia,** in **Gravel,** and in **Renal Colic**.

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Powder in 1-oz. vials, dose 10 grains, 4 times daily (under physicians prescriptions), per 100 $1 25.

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LIME JUICE and PEPSIN

Pure Concentrated Pepsin combined with Pure Lime Juice.

An exceedingly valuable Combination in cases of Dyspepsia, Indigestion, Biliousness, Heartburn and Mal-Assimilation.

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Impaired Digestion is the consequence of a sedentary life, coupled with nervous and mental strain.

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DOSE—Adult, dessertspoonful to tablespoonful, after eating. Children one-half to one teaspoonful, according to age.

PRICE, 6 oz. Bottles, 50 Cents.
16 oz. Bottles, $1.00.

Robinson's
ELIXIR PARALDEHYD

10 PER CENT.

Hypnotic, Sedative Anodyne Diuretic.

INDICATIONS. ***Sleeplessness, Irritability, Nervousness, Headache, Colic, Etc.***

In doses of 45 grains, it calms restlessness and insomnia, and procures unbroken sleep of from four to seven hours duration, leaving behind neither languor, nausea, nor digestive disorders. It is proposed as possessing the good without the evil qualities of Chloral.

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Represents the digestive properties of the freshly extracted juice of the pineapple (Ananassa Sative) and other enzymes.

Each tablespoonful should digest eight ounces of albumen, meat fibrin or casein.

Pinozyme presents no incompatibilities with the gastric or intestinal secretions, and is a true digestant, which being active in either acid or alkaline menstruum, exerts its digestive properties throughout the entire alimentary tract.

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As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, Physicians are earnestly requested when prescribing the Syrup, to write **"Syr. Hypophos. FELLOWS".**

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

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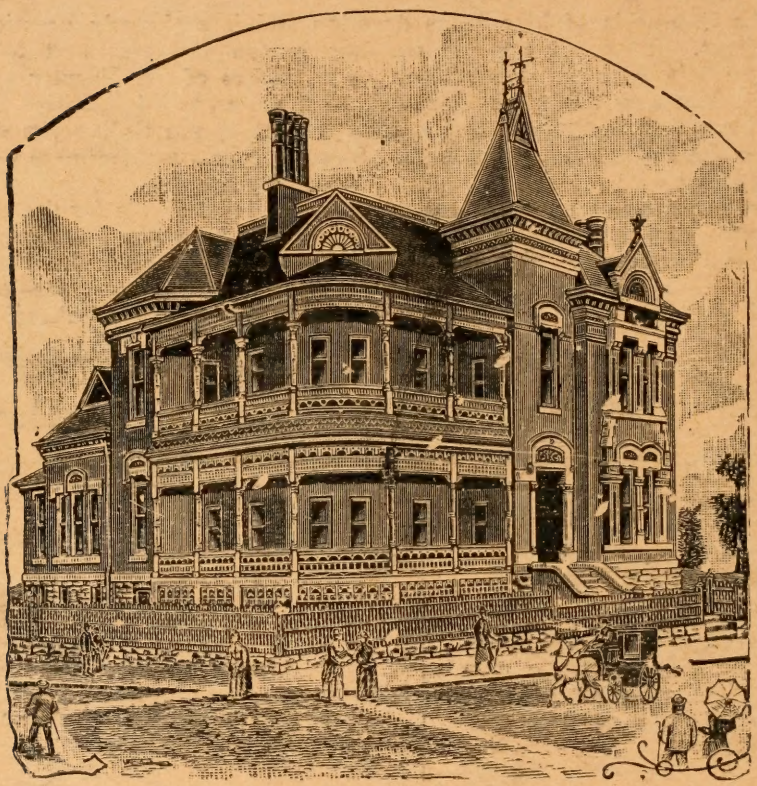

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